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XVIII. *Some Account of two Mummies of the Egyptian Ibis, one of which was in a remarkably perfect State.* By John Pearson, Esq. F. R. S.

Read June 13, 1805.

THE ancient Egyptians were not more remarkable for their attainments in science, than for the extraordinary attention they paid to the bodies of their deceased relatives, preserving their remains by arts which are now either unknown, or imperfectly recorded, and depositing them in subterranean structures, which to this day excite the curiosity and wonder of the philosophic traveller. The practice of embalming was not confined, as is well known, to the conservation of human bodies exclusively ; it was likewise employed to protect the remains of several of their sacred animals from that decay and dissolution which usually ensues, on the exposure of animal substances to the action of the earth, or of the atmosphere. We learn from HERODOTUS,* that among the different animals which the Egyptians honoured with this peculiar mode of sepulture, were the cat, the ichneumon, the mus araneus terestris, the ibis, and the hawk ; but, whether this be a complete enumeration or not, it is almost impossible, at this period of time, to determine. Mummies of the hawk and of the ibis have been often drawn out of the catacombs ; and OLIVIER asserts, that he has not only met with the bones of the mus

• Euterpe.

araneus terrestris, but also with those of several of the smaller species of quadrupeds, and that the bones of different animals are not unfrequently contained within the same wrapper.* It is however confidently affirmed by different writers, that the more modern Egyptians have frequently included a single bone of some quadruped within the usual quantity of cloth, which they have artfully taken from some decayed mummy in the catacombs, and then fraudulently sold this sophisticated production as an ancient mummy. Hence, any general conclusions founded on meeting with the bones of other quadrupeds, must be received with diffidence and suspicion.†

The mummies which are taken out of the catacombs of the birds at Saccara, and at Thebes, are included in earthen jars, closed with a cover of the same material. The cloth which envelopes the mummy is sometimes tolerably firm and perfect; but, on removing this, we commonly meet with a quantity of dust, resembling powdered charcoal in its appearance, intermixed with the bones, or the fragments of bones, belonging to the creature which had been contained in it. The decomposition is often so complete, that no traces of the animal remain; but, on other occasions, the intire collection of bones, with the bill of the bird, have been found in a condition sufficiently perfect to construct a skeleton with them. In the fourth volume of the *Annales du Muséum National d'Histoire naturelle*, M. CUVIER has published an interesting memoir on the Ibis, with an engraving of the skeleton of that bird, which had been formed of the bones collected from the catacombs at Thebes. That able naturalist, after comparing the ancient accounts of that celebrated bird with those of the moderns,

* *Voyage en Egypte*, Tome III. chap. viii.

† Phil. Trans. 1794,

assigns it a place among the species of curlew, under the name of *Numenius Ibis*.

The accounts of the mummy of the ibis which have been nitherto made public, were collected from observations made on it in a decayed state: I presume, therefore, that a description of the mummy of an ibis in a condition unusually perfect, may not be unacceptable to the curious. Among the curiosities, natural and artificial, which were collected by the late Major HAYES,* in the years 1802 and 1803, were two small mummies, which he took out of the catacombs at Thebes in Upper Egypt. They were contained in earthen jars, and were enveloped in cloth, similar to those which are brought from Saccara. At the request of his family, I first examined the larger of the two, and found the covering to consist of bandages of cloth, strong and firm, and about three inches broad. The first circumvolutions of the roller separated easily; but, as I proceeded, they adhered more firmly to each other, and were at length so closely cemented together by a resinous-like substance, that I was obliged to divide the folds of the cloth with a strong knife. Each layer of the bandage appeared to have been imbued with some bituminous or resinous substance, in a liquid state, and the roller was farther secured by strong pieces of thread, so that the whole mass was rendered extremely hard and coherent. When I had removed the greater part of the covering, I found that it had contained a bird, which was thickly covered with the same kind of substance that had cemented the different strips of the roller. The examination

* This accomplished young gentleman, who served during the late campaign in Egypt, died July 26, 1803, at Rosetta, aged 25 years. By his premature death, his country lost an able officer, and a zealous promoter of the interests of science.

was now carried on more slowly, by picking out carefully all the loose bituminous matter that could be removed without injuring the mummy; and, after the labour of many hours, I succeeded in displaying the whole bird, as it had been deposited by the embalmer. The operator who had embalmed this bird, had previously disposed its several parts with great order and regularity.

The neck was twisted, so as to place the vertex of the head on the body of the bird, a little to the left side of the sternum. The curved bill, with its concave part turned upwards, descended between the feet, and reached to the extremity of the tail. Each foot, with its four claws turned forwards, was bent upwards, and placed on each side of the head. The wings were brought close to the sides of the body. It was impossible to remove much of the bituminous matter from the back and wings, without injuring the mummy; but I took away a quantity sufficient to show that the plumage was white, the feathers being tipped with dark brown at their extremities; I could not, however, uncover the tail feathers, so as to determine their colour. The bird had attained its full growth; for the quills of one wing, which had suffered some injury in removing the bandage, were in a perfect state: the largest of these quills is delineated, of the natural size, in the annexed Plate. The following are the dimensions of such parts of the Ibis as are accessible.

Length of the bird, from the termination of the neck	Inches.
to the extremity of the tail	- - - - -

$12\frac{1}{2}$

Length of the neck, in which ten vertebræ can be traced	- - - - -
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$6\frac{1}{2}$

Length of the head and bill, following the curve	-
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8

	Inches.
Length of the sternum - - - - -	4
From the end of the metatarsal bone to the extremity of the longest toe - - - - -	7
The longest toe - - - - -	$3\frac{1}{2}$
Width of the body at the shoulders - - - - -	$4\frac{1}{2}$
Circumference of the body, at its thickest part - - - - -	$13\frac{1}{2}$
Weight of the mummy, $16\frac{1}{2}$ ounces Troy.	

This mummy is in a very firm and intire state, exhibiting no particular marks of decay, although it is probable, that the greater part of 3000 years has elapsed since it was interred; for the destruction of the Egyptian Thebes is of an earlier date than the foundation of any city now existing. The appearance of the mummy renders it probable, that the bird was immersed in the bituminous matter, when it was in a liquid state, and capable of insinuating itself into all the inequalities on the surface of the body; the several folds of the bandage must have been likewise covered with the same varnish: but the animal was certainly not boiled in the liquid, as GREW supposed,* since the feathers are not at all corrugated, nor indeed materially changed from their natural appearance.

The examination of different mummies of the Ibis proves indubitably that the same care has not been used, nor have the same methods been followed, in the preparing of them; but, whether the difference observed depended upon the condition of the bird when it was embalmed, or upon the unequal skill and diligence of the operators, cannot now be ascertained. This, however, is sufficiently evident, that the variety exhibited in their appearance does not depend on the place where the bird was deposited, since many mummies of birds have been taken

* *Museum Regalis Societatis*, § 1.

from the catacombs at Thebes, in as imperfect and decayed a condition as those which have been procured from Saccara.

I have been favoured with the permission to unroll another mummy of the Ibis, also sent from Thebes by Major HAYES, which had been embalmed in a different manner from that I have already described. The cloth which surrounded it was of a coarser texture, and had not been so thoroughly imbued with bitumen, nor was the roller continued down to the body of the bird; for, when I had removed as much of the bandage as reduced the mummy to about $\frac{2}{3}$ of its original bulk, I found that, instead of circular bands, it was wrapped in several different portions of coarse linen cloth, each of them large enough to contain the whole Ibis. This Ibis was in a decayed state, and had so little coherence, that its several parts separated on handling it: there was a small portion of the neck, with white plumage upon it, remaining, but neither the head, the bill, nor any remains of them, could be discovered. The feathers of this bird are of a dark brown colour, in some parts tipped with white; the neck and the tail have a white plumage, and as much of the tail as could be preserved displayed the tufted appearance delineated in the engraving of M. CUVIER.

Two species of the Ibis, the black and the white, have been noticed by HERODOTUS,* ARISTOTLE,† and PLINY:‡ but PLUTARCH has only mentioned the white Ibis.§ ARISTOTLE and PLINY have contended that the black Ibis was found only at Damietta, (Pelusium,) and that, in all the other parts of Egypt, the white Ibis only was seen. Whether the two birds which I

* Euterpe.

‡ C. PLINII *Nat. Hist.* lib. x. c. xxx.

† *Hist. Animalium*, lib. ix. c. xxvii.

§ *De Iside et Osiride.*

have described present specimens of the black and white Ibis, I cannot presume to determine. The anterior layer of feathers of the Ibis last examined is of a dark colour; but the plumage beneath is white. Many of the dark feathers are not at all marked with white.

The most ancient, and probably the most authentic account which we possess of the Egyptian art of embalming, is delivered by HERODOTUS;* and what is offered upon this subject by subsequent writers, seems to have been copied from this early historian. Their narratives relate principally to the conservation of human bodies; and, in the preparing of these, it appears that the contents of the abdomen, at least, were removed by incision, or were corroded by injecting a liquor extracted from the cedar-tree.† But it is almost certain, that birds were not previously opened, nor was any art employed to remove the stomach and intestines; for, on examining the interior parts of the dark coloured Ibis, I met with a soft spongy substance, lying quite loose, containing a great number of scarabæi in an imperfect state; these had probably been taken as the food of the bird, and were not digested at the time of its death, but remained in the alimentary canal to the present period. CUVIER also remarks, that he found within the mummy of an Ibis part of the skin and scales of a serpent.

As larvæ of dermestides and other insects have been detected among the dust and bones of a mummy, it may be presumed that the Ibis was not always embalmed in a fresh state; which may indeed account, in part, for the very imperfect condition in which many of these birds are found.

The Ibis was held in great veneration by the Egyptians for

* Euterpe.

† PANCIROLLUS *Rerum memorab.* pars i. tit. xlvi.



W. H. Dall del.



its singular utility in destroying serpents, and other noxious reptiles: * hence, the figure of this bird is seen on many monuments of Egyptian antiquity, as an inhabitant of their temples, and an attendant on their sacrifices. † It was likewise employed as a symbol in their hieroglyphical writing; ‡ and the punishment of death was inflicted on those who killed this sacred bird. The other extraordinary qualities ascribed to the Ibis by PLINY, PLUTARCH, and some succeeding writers, are either too indistinctly expressed to be quite intelligible, or too obviously absurd to be credible. §

EXPLANATION OF PLATE VIII.

- A, Vertebræ of the neck.
 - B, The head.
 - C, The bill.
 - D, The tail.
 - E, The right leg and foot.
 - F, The left leg and foot.
 - G, The hind claw bent forwards.
 - H, The sternum.
 - I, A quill of the wing feathers.
- The whole is represented of the natural size.

* The remark of CICERO on this subject, is perhaps no less true than shrewd:
“Ipsi, qui irridetur, Egyptii, nullam belluam, nisi ob aliquam utilitatem, quam ex
ea caperent, consecraverunt.” *De Natura Deorum*, lib. i.

† *Explication de divers Monumens singuliers*, CALMET.

‡ *Hieroglyph. Horapollo*, xxxvi. RHODIGIN. *Antiq. Lect.* lib. iv. c. xvi.

§ C. PLINII *Nat. Hist.* lib. viii, c. xxvii. PLUTARCH. *De Iside*, &c.